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EXAMINER

GLASS, ERICK DAVID

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9-17, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos (4,992,721) in view of Yoneta et al. (5,574,345).

With respect to claims 1, 9, and 16, Latos discloses a system and method for controlling the system, comprising: a permanent magnet motor (Fig. 2, #22); a first phase controlled rectifier that selectively couples the motor to a power source for providing power to the motor during an engine starting operation (Fig. 2, #26 a permanent magnet motor that is coupled with an engine so that selectively couples the motor #22 to 3-phase power) and the permanent magnet motor is coupled with the engine and rotate simultaneously (Fig. 2, #22 and #12 move simultaneously; see also col. 3, lines 40-62). With respect to claim 16, Latos also discloses a power converter (fig. 2, 32) and a gas turbine engine (col. 3, lines 43-44; jet engine is interpreted as a gas turbine).

Latos does not disclose a second rectifier.

Yoneta et al. discloses a second rectifier circuit (fig. 3, #4). Implementing the rectifier circuit with the inverter circuit of Latos (Fig. 2, #32) makes the Latos system have a second rectifier that couples the motor (Fig. 2, #22) to a load (Fig. 2, #16). The

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motivation to use a second rectifier is to rectify the ac regenerative power being supplied back.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement into the Latos system a second rectifier, thereby providing the advantage of using the inverter already in the circuit to rectify the regenerative power being supplied back, as taught by Yoneta et al. (column 2, lines 47-51).

With respect to claims 2, 10, and 17, Latos does not teach were the rectifiers alternatively conducting. Yoneta et al. discloses the first and second rectifiers controlled so that one is conducting while the other is off (column 4, lines 25-32). It would have been obvious to one having ordinary skill in the art to implement alternately conducting rectifiers into the circuit of Latos to allow the second rectifier to rectify the ac regenerative power being supplied back from the motor, with power failure of the ac power source, as taught by Yoneta et al. (column 4, lines 25-31).

With respect to claims 3 and 11, Latos discloses a power converter associated with the first rectifier that converts power from the source to a variable voltage (Fig. 2, #32 supplies variable voltage to #22 for starting the engine).

With respect to claims 4 and 12, Yoneta et al. disclose a dc link capacitor bank (Fig. 3, 3). It is would have been obvious to one having ordinary skill in the art at the time of the invention to implement a capacitor across the dc link circuitry of Latos, to provide a smoothing the transferred signal as taught by Yoneta et al.

With respect to claims 5, 13, and 14, Yoneta et al. disclose the second phase controlled rectifier (fig. 3, 4). A rectifier inherently converts three-phase power into a constant DC voltage. Adding a rectifier to the circuit of Latos make the inverter of Latos the power converter (fig. 2, #32). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to implement into the Latos system a rectifier, thereby providing the advantage of rectifying the regenerative power supplied back, as taught by Yoneta et al (column 2, lines 47-51).

With respect to claims 6, 15, 19, and 20, Latos discloses a filter between the inverter and the load, where the filter provides a selected quality of power to the load (Fig. 2, #34).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Latos and Yoneta et al; as applied to claims 1, 5, and 6 above, and further in view of Honda (2004/0008527).

Latos and Yoneta et al. do not disclose the filter comprising a differential mode filter in series with a common mode filter. Honda discloses a differential mode filter in series with a common mode filter (Fig. 7, #70). The motivation to use both filters in series is to filter both the differential mode noise and the common mode noise ([0051]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention that the filter of Latos and Yoneta et al. would include differential and common mode filters, respectively, thereby providing the advantage of filtering differential mode noise and common mode noise, as taught by Honda.

Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Latos (4,992,721) in view of Yoneta et al. (5,574,345) and in further view of Amano et al. (6,426,608).

With respect to claims 8 and 18, Latos, and Yoneta et al. do not disclose a pulse width modulating converter. Amano et al. teaches a pulse width modulating converter (fig. 1, 8). It is obvious to one having ordinary skill in the art at the time of the invention to implement a PWM converter in the circuit of Latos and Yoneta et al, to provide the advantage to changing the control system to digital to receive a more reliable signal as taught by Amano et al.

Response to Arguments

Applicant's arguments filed August 2, 2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the applicant's invention has more parts to constitute a similar outcome of what is known in the art. The Yoneta reference shows an inverter used to rectify regenerative power back through the system to the load.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erick Glass whose telephone number is 571-272-8395. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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EG



LINCOLN DONOVAN
SUPERVISORY PATENT EXAMINER